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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/607,915  | 06/27/2003  | Yoshihiro Kobayashi  | TJK/395             | 8119             |
| 27717   | 7590        | 12/11/2006           | EXAMINER            |                  |
| SEYFARTH SHAW LLP<br>131 S. DEARBORN ST., SUITE2400<br>CHICAGO, IL 60603-5803 |             |                      | LIN, JAMES          |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 1762                |                  |

DATE MAILED: 12/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/607,915

Applicant(s)

KOBAYASHI, YOSHIHIRO

Examiner

Jimmy Lin

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 12,17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12,17 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 12 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarnecki (U.S. Patent Application Publication 2003/0089252, hereafter '252) in view of Towns et al. (U.S. Patent 6,153,711, hereafter '711), and Park et al. (U.S. Patent 5,053,298, hereafter '298).

'252 teaches forming an electroluminescent element by intaglio printing a light-emitting material [0008, 0010]. '252 does not explicitly teach that the ink has a viscosity of 0.5-500 cP. However, '252 does teach that the viscosity should be chosen to be a suitable viscosity for gravure printing and that such viscosities are taught by Towns '711 [0020]. Towns '711 teaches ink viscosities of 1-200 cP (col. 2, lines 56-67). The selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). See MPEP 2144.07. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have chosen a viscosity of 1-200 cP as the particular viscosity of '252 with a reasonable expectation of success because '711 teaches that 1-200 cP are suitable printing ink viscosities and because '252 teaches using the viscosities of '711.

'252 and '711 are described above. '252 teaches that multiple colors are applied and that each color is dried (i.e., hardened) before the next color is applied [0022], but does not teach that a later color is printed after a protective layer is placed over the already printed colors. However, '298 teaches that in printing different colored pixels, each pixel should be covered to protect it during the deposition of the subsequent pixel (col. 3, line 29-col. 4, line 28). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have covered each pixel with a protective film before printing the subsequent pixel because '298

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teaches that such is a suitable method for protecting each already-deposited pixel during the deposition of subsequent pixels.

'252 does not explicitly teach that the depth of the groove or a cell of the intaglio is in a range of 500 Å to 1mm, but does teach that the depth of the cells is a result-effective variable because it controls the thickness of the film formed [0011]. It has been held that the discovery of the optimum value of a result effective variable in a known process is ordinarily within the skill in the art. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have optimized the depth of the cells of '252 to have achieved the desired thicknesses of [0022].

Claim 17: The intaglio is formed into plural cells to print pixels [0009], [0011].

Claim 18: Separate stations may be used for each color [0022]. Thus, the area of the group of cells that provide ink from one printing plate is smaller than the total area of the light-emitting layer on the formed device because the total area of the emitting pixels comprises all three colors.

### ***Response to Arguments***

3. Applicant's arguments filed 10/23/2006 have been fully considered but they are not persuasive.

Claims 12 and 16-18 as rejected over Sarnecki '252, Towns '711, and Park '298.

The Applicant argues that the disclosure of Towns discloses the ink viscosity in printing methods other than the intaglio printing as disclosed and claimed by the Applicant, and further arguing that the premised coating methods of Towns are disclosed as ink-jet printing, spin-coating, blade-coating, etc. However, Towns also teaches that suitable coating techniques can be reverse roll coating, meniscus coating, and contact/transfer coating (col. 1, lines 32-34). Intaglio printing can belong to one of these coating techniques as suggested in [0022] of Sarnecki.

The Applicant argues that the use of inks utilizing a low viscosity ink ranging from 0.5 cP to 500 cP in intaglio printing methods was not contemplated or even thought to be achievable by the person skilled in the art. However, Towns explicitly teaches the use of inks having a viscosity within the claimed range. These inks can be used in methods such as reverse roll coating, meniscus coating, and contact/transfer coating, as discussed above.

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The Applicant argues that it is asserted in the Office Action that the thickness of the coated film and the depth of the cells as disclosed in Sarnecki are substantially the same. The Applicant further argues that the depth of the cell of the present invention does not adversely affect the thickness of the coated film, rather it aids in the wetting and spreading of the ink. However, Sarnecki merely teaches that the "desired print thickness can be controlled with gravure printing by controlling the depth of the cells" [0011]. The teaching of Sarnecki suggests that the thickness of the film can be controlled. There is no explicit suggestion that the thickness of the coated film and the depth of the cells are substantially the same, as interpreted by the Applicant. In response to applicant's argument that the depth of the cell in the present invention aids in the wetting and spreading of the ink, Sarnecki teaches a different reason for adjusting the depth (i.e., a result-effective variable, as discussed above). Although the Applicant has a different reason for using such depths, one of ordinary skill in the art would still adjust the depth of the cells based on the teaching of Sarnecki because of Sarnecki's explicit teaching of such a result-effective variable.

### *Conclusion*

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Lin whose telephone number is 571-272-8902. The examiner can normally be reached on Monday thru Friday 8AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JL  
JL

  
**KEITH HENDRICKS**  
**PRIMARY EXAMINER**